

METHOD AND APPARATUS FOR MEASURING
AND ORIENTING GOLF CLUB SHAFT

Abstract of the Disclosure

[0155] The preferred orientation, or planar
5 oscillation plane, of a golf club shaft is located by
measuring the oscillation of the shaft when an impulse
is applied. Preferably, the out-of-plane oscillation
is measured at a large number of angular positions
about the shaft axis, and the principal planar
10 oscillation plane is identified by that pair of opposed
angular positions in which the out-of-plane oscillation
is smallest. The location of the preferred orientation
may be marked on the shaft and used to assemble a golf
club with the planar oscillation plane in a
15 predetermined orientation. The straightness of the
shaft can also be determined by deriving its spring
constant from its oscillation frequency and then
measuring the restoring force when the shaft is
deflected by the same nominal amount at different
20 angular positions; differences in restoring force can
be attributed to differences in actual deflection
distance resulting from lack of straightness.